

Claims:

1. A method of making a colored contact lens; the method comprising printing at least one layer of a colorant onto a contact lens using a printing process selected from the group consisting of ink jet printing, electrophotographic printing, thermal transfer printing, and photographic development printing.
2. The method of claim 1 wherein the printing process comprises ink jet printing.
3. The method of claim 2 where in the colorant is an ink comprising at least one pigment.
4. The method of claim 2 wherein the colorant is an ink comprising at least one dye.
5. The method of claim 2 wherein the colorant is an organic-based ink.
6. The method of claim 2 wherein the colorant is an ink having a viscosity of from about 1 to about 50 centipoise.
7. The method of claim 2 wherein the ink has a viscosity of from about 2 to about 30 centipoise.
8. The method of claim 2 comprising dispersing a first colorant into the contact lens before printing.
9. The method of claim 2 further comprising coating the lens with a binding solution.
10. The method of claim 9 wherein the coating is done during printing.
11. The method of claim 9 wherein the coating is done after printing.
12. The method of claim 9 wherein the binding solution comprises at least one monomer.

13. The method of claim 9 wherein the binding solution comprises at least one hydrophilic monomer and at least one hydrophobic monomer.
14. The method of claim 13 wherein the binding solution comprises 2-hydroxyethyl methacrylate and 2-ethoxyethyl methacrylate.
15. The method of claim 12 wherein the binding solution further comprises an adhesion promoter.
16. A colored contact lens produced by the process of claim 1.
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17. The method of claim 1 wherein the printing process comprises electrophotographic printing
18. The method of claim 17 wherein a electrophotographic printer prints the colorant in the form of toner directly onto the contact lens using a photosensitive sphere.
19. The method of claim 18 wherein the sphere rolls across the contact lens to transfer toner to the lens.
20. The method of claim 18 wherein the lens is placed on the sphere and toner is transferred to the lens using a toner transfer mechanism.
21. The method of claim 20 wherein the toner transfer mechanism is selected from the group consisting of a roller, a mold, and a ball.
22. The method of claim 17 wherein a electrophotographic printer prints the colorant in the form of toner directly onto the contact lens using a photosensitive hemisphere.
23. The method of claim 18 wherein the hemisphere contacts the contact lens to transfer toner to the lens.
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24. The method of claim 18 wherein the lens is placed on the hemisphere and toner is transferred to the lens using a toner transfer mechanism.

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25. The method of claim 20 wherein the toner transfer mechanism comprises a ball.

26. The method of claim 1 wherein the printing process comprises thermal transfer printing.

27. The method of claim 26 using a multiple-color complement system

28. The method of claim 27 wherein each component color of the multiple-color complement system is associated with a ribbon for transferring the component color to the contact lens or to a film on a mold for the contact lens.

29. The method of claim 28 wherein each ribbon is flat.

30. The method of claim 28 wherein each ribbon is curved.

31. The method of claim 1 wherein the printing process comprises photographic development printing.

32. The method of claim 31 wherein a photographic development system is used, the system comprising:

- a) a film composed of a plurality of light sensitive layers;
- b) a computer-controlled source to expose each of the plurality of light sensitive layers; and
- c) a chemical processing system to develop each of the exposed light sensitive layers, thereby forming a plurality of colors onto the contact lens or onto a film in a mold for the contact lens.

33. A method of making a colored contact lens, the method comprising:

- (a) printing a first layer of a colorant in a first pattern onto a contact lens using a printing process selected from the group

consisting of ink jet printing, electrophotographic printing, thermal transfer printing, and photographic development printing;

(b) printing at least one second layer of a colorant in a second pattern onto a contact lens using a printing process selected from the group consisting of ink jet printing, electrophotographic printing, thermal transfer printing, and photographic development printing; and

(c) coating the colored contact lens with a binding solution comprising a monomer.

34. A colored contact lens produced by the process of claim 33.
35. The method of claim 33 wherein step (c) is performed simultaneously with steps (a) and (b).
36. The method of claim 33 wherein the second pattern overlaps the first pattern, at least in part.
37. The method of claim 33 wherein the second pattern overlaps the first pattern such that at least 50% of the first pattern is covered.
38. The method of claim 33 wherein the coating is applied to the contact lens only in regions that are not in an optical zone.
39. An improved method of making colored contact lenses, the improvement comprising printing at least one layer of a colorant onto a contact lens using a printing process selected from the group consisting of ink jet printing, electrophotographic printing, thermal transfer printing, and photographic development printing.

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40. The improved method of claim 39 wherein the printing step comprises printing onto a film in a mold wherein the film becomes integral with the contact lens when the contact lens is formed in the mold.
41. The improved method of claim 39 wherein the printing step comprises printing directly onto the contact lens.
42. The improved method of claim 39 wherein the printing step comprises printing onto a pad such that the pad prints directly onto the contact lens.
43. A contact lens comprising an image thereon, wherein the image is selected from the group consisting of a cosmetic pattern, an inversion mark, a SKU code, and an identity code; and wherein the image is produced using a digital printing process selected from the group consisting of ink jet printing, electrophotographic printing, thermal transfer printing, and photographic development printing.
44. A contact lens of claim 43, wherein the image is a cosmetic pattern.
45. A contact lens of claim 44, wherein said cosmetic pattern is an iris pattern.
46. A contact lens of claim 43, wherein the image is an inversion mark.
47. A contact lens of claim 43, wherein the image is an SKU code.
48. A contact lens of claim 47, wherein the contact lens further comprises an iris pattern and wherein the SKU code is blended with the iris pattern.
49. A contact lens of claim 43, wherein the image is an identity code.

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